

**REMARKS**

In accordance with the foregoing, claim 14 is amended. Claims 14 – 21 and 25 are pending and under consideration. No new matter is presented in this Amendment.

**Rejection of claims 14 and 16 – 21 under 35 U.S.C. §112, first paragraph: written description**

At page 3 of the Office Action, claims 14 and 16 - 21 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Examiner alleged that the claimed chemical formulas do not specify how the ligand coordinates to the metal. For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

Claims 14 is amended as suggested by the Examiner to include the recitation that L is a bidentate ligand coordinated with carbon and nitrogen. Therefore, the rejection should be withdrawn.

**Rejection of claims 14 and 16 – 21 under 35 U.S.C. §112, first paragraph: enablement**

Also at page 3 of the Office Action, claims 14 and 16 - 21 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. The Examiner alleged for a compound of the formula L3M, M cannot be Pt or Zn, since Pt is divalent or tetravalent and Zn is monovalent or divalent. For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

Claim 14 is amended to delete Pt and Zn from the selections for M. Therefore, the rejection should be withdrawn.

**Rejection of claims 14 and 16 – 21 under 35 U.S.C. §112, second paragraph**

At page 4 of the Office Action, claims 14 and 16 - 21 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner alleged that it is not clear if the formula L3M is a complete formula, on the alleged grounds that if M is Pt or Zn, an uncharged

complex cannot be formed. For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

As mentioned above, Claim 14 is amended to delete Pt and Zn from the selections for M. Therefore, the rejection should be withdrawn.

**Rejection of claims 14, 19 and 21 under 35 U.S.C. §102(b) over Igarashi**

Also at page 4 of the Office Action, claims 14, 19 and 21 were rejected under 35 U.S.C. §102(b) as being anticipated by Igarashi et al. (U.S. Patent Pub. 2001/0019782 A1) (hereinafter, "Igarashi"). The Examiner alleged that Igarashi describes an iridium complex of the formula L<sub>3</sub>M wherein M is Ir and L is the same ligand represented by Chemical Formula 13 of claim 14 (referring to complex 1-19 at page 12 of Igarashi). For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

Claim 14 is amended to delete the compound of Chemical Formula 13. Therefore, the rejection should be withdrawn.

**Rejection of claims 14, 15, 19, 21 and 25 under 35 U.S.C. §103(a) over Igarashi**

At page 5 of the Office Action, claims 14, 15, 19, 21 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Igarashi. The Examiner acknowledged that Igarashi does not explicitly disclose iridium complexes of formula L<sub>3</sub>M wherein L is represented by Chemical Formulas 4 or 9. The Examiner alleged that the claimed complexes are within the scope of Igarashi's iridium complexes and are similar to specific complexes disclosed. In particular, the Examiner referred to paragraph [0043] of Igarashi as describing that orthometalating ligands of iridium complexes may be aryl group-substituted nitrogen-containing heterocyclic derivatives. The Examiner noted that naphthyl is included in the list of aryl groups and that pyridine is included in a list of nitrogen-containing heterocycles. The Examiner further referred to complexes 1-60 and 1-62 of Igarashi and alleged that it would have been obvious to provide a complex similar to 1-62 of Igarashi but lacking the cyano substituent or a complex similar to 1-60 but having an unsubstituted pyridine ring in place of the isoquinoline ring system. For the following reasons, this rejection is respectfully traversed and reconsideration is

requested.

As acknowledged by the Examiner, Igarashi does not disclose the specific iridium complexes of the present claims. In particular, Igarashi does not describe the ligands of Chemical Formulas 4 or 9 of claim 14 or the specific complexes of Chemical Formulas 26 or 31 of claims 26 or 31. Moreover, Igarashi would not have suggested these particular complexes. Paragraph [0043] of Igarashi, referred to by the Examiner, by broadly describing aryl and heterocyclic substituents, generically describes a virtually limitless number of possible complexes. There is nothing in this description that would suggest the specific complexes recited in the present claims. Moreover, regarding complexes 1-60 and 1-62 of Igarashi, which the Examiner alleges are similar to the claimed complexes, a variety of alterations and substitutions could be made, yielding a multiplicity of possible complexes. Therefore, it is irrelevant whether a person skilled in the art would have expected the claimed complexes to be light-emissive and suitable for purposes taught by the prior art in the absence of any specific teaching that would lead a person skilled in the art to these specific complexes in the first place. Accordingly, the Examiner has not established a *prima facie* case of obviousness over Igarashi. Therefore, the rejection should be withdrawn.

**Rejection of claims 16 – 18 and 20 under 35 U.S.C. §103(a) over Igarashi and further in view of Park and Yu**

At page 7 of the Office Action, claims 16 – 18 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Igarashi et al. as applied to claims 14, 19 and 21 above and further in view of Park et al. (U.S. Patent Pub. 2003/0042848 A1) (hereinafter, "Park") and Yu et al. (U.S. Patent Pub. 2004/0094768 A1) (hereinafter, "Yu"). For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

As described above, Igarashi does not teach or suggest the particular complexes recited in independent claim 14. Park and Yu also do not teach or suggest the specific complexes recited in independent claim 14 and accordingly, do not overcome the deficiencies of Igarashi. Therefore, the rejection should be withdrawn.

**CONCLUSION:**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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